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(Am. Mus. No. 84610), an adult male collected July 21, 1880, at Lomita Ranch, Hidalgo Co., Texas. It has a few black feathers in the pectoral region and many in the back, the specimen being in moult from the immature to the mature plumage. The female type (Am. Mus. No. 84611) is an adult female in fresh spring plumage, taken at Lomita, March 19, 1880.

THE EASTERN FORMS OF *GEOTHYLPIS TRICHAS*.

BY FRANK M. CHAPMAN.

SEVENTEEN years ago, under the above-given title,¹ I described a Florida form of *Geothlypis trichas* as *Geothlypis trichas ignota*, which was later shown by W. Palmer² to extend through the coast region westward to Texas (Jackson County, Jan. 6) and northward to the Dismal Swamp in Virginia.

At the same time Mr. Palmer restricted the name *trichas* of Linnæus to the Yellow-throat breeding from southern New England southward through the Piedmont region into Georgia, while to the Yellow-throat breeding from southern New England northward he applied the name *brachidactyla* of Swainson.

This ruling was accepted as correct by the A. O. U. Committee on Classification and Nomenclature, and we have had, therefore, east of the Alleghanies, three forms of Yellow-throat, a southern, a middle, and a northern. Many ornithologists, however, regarded this view of the nomenclatural status of these birds as far from satisfactory! That there was a Southern Yellow-throat and a Northern Yellow-throat was beyond doubt, but that an intervening form was also deserving of recognition by name has been frequently questioned. This opinion is voiced by Mr. Brewster³ who says: "The characters by which the two forms are said to be separable seem to me trivial and I fear they are also inconstant"

¹ Auk, VII, 1890, 11.

² *Ibid.*, XVII, 1900, 223.

³ Birds of the Cambridge Region, 1906, p. 354.

In preparing the manuscript for a monograph of North American Mniotiltidæ it seemed desirable, therefore, to reconsider the relationships of these birds. To this end Mr. Ridgway has kindly loaned me the pertinent specimens under his charge. I have also had birds from Doctors Bishop and Dwight, and have examined the collections of Mr. Brewster, of the Biological Survey, as well, of course, as the specimens in the American Museum of Natural History.

This material shows that the middle Yellow-throat, the so-called *trichas*, averages smaller and paler than either of the forms south (*ignota*) or north (*brachidactyla*) of it. The differentiation is so slight, however, and is so frequently bridged by variation as to invalidate the claim for distinction by name of this central form.

This, it is true, is a matter of opinion, but in examining the literature bearing on the question an interesting discovery was made which places the whole matter in a new light.

In applying the name *trichas* to the Yellow-throat of the Middle States Mr. Palmer accepted the prevailing opinion that the type locality for this form is Maryland. It appears, however, that this is not the case, the specimen which Edwards¹ figured and described, and which is cited first by Linnæus,² not having come from Maryland but from Carolina! Edwards's (*l. c.*) statement of its origin is as follows: "This bird was the property of Mr. Elliot, Merchant, in Broad Street, London, who received it, with others, preserved in spirits, from Carolina, in North America; and was so obliging as to lend them all to me, to take drawings of them" (*l. c.*). The origin of the name "Maryland Yellow-throat," which Edwards gave to his Carolina bird, as well as the cause for the erroneous belief that his type came from Maryland, is revealed by the remarks which follow the quotation just given. He continues: "J. Petiver, in his *Gazophylacium*, plate VI. has given the figure of a bird, which I believe to be the same with this; for which reason I continue the name he has given it: all he says of it is, '*Avis Marylandica gutture luteo*, the Maryland Yellow-Throat. This the Rev. Mr. H. Jones sent me from Maryland.' Petiver's

¹ Gleanings of Nat. Hist., 1758, I, p. 56, pl. 237.

² Syst. Nat., ed. 12, 1766, 293.

figure is of the same size with mine, and hath such a black line from the forehead drawn through the eye: it hath, I believe, never till now been described, Petiver having given it only a name.

"P. S. Since the writing of the above, I have received the Yellow-Throat, together with a drawing of it, very neatly and exactly done, by Mr. William Bartram, of Pennsylvania, who hath enabled me to give a further account of this bird; for he says, it frequents thickets and low bushes by runs (of water, I suppose, he means) and low grounds; it leaves Pennsylvania at the approach of winter, and is supposed to go to a warmer climate."

The "Carolina" of Edwards, who wrote in 1758, included the North and South Carolina of to-day, his type, therefore, coming from within the range of *ignota*. The question, however, may properly be asked whether Edwards's type was not a migrant and hence, under the current status of this group, either *trichas* or *brachidactyla*. But, assuming that Edwards's type *had* come from Maryland, it might with equal pertinence be asked, how should we know that it was not a migrant *brachidactyla*?

Again it has been said that the present writer refused to accept Audubon's name *roscoe* for a Yellow-throat described from Mississippi as applicable to the form known as *ignota* on the ground that Audubon's type was doubtless a migrant from the north. (It was shot in September). The name *roscoe* was not rejected primarily for this reason, but because Audubon himself, presumably on the basis of actual specimens, referred his *roscoe* to the bird then known as *trichas*, and without positive evidence which would prove him to have been in error we have absolutely no right to reverse his determination.

On the basis, therefore, of locality alone, the name *trichas* is applicable to the southern Yellow-throat heretofore known as *ignota*; but, as a matter of fact, we have something more than mere locality on which to base an opinion, Edwards's figure and description being obviously more applicable to the southern than to the northern bird, while, although this now has no nomenclatural bearing on the matter, Audubon's figure of *roscoe* is quite as certainly *not* based on the southern form.

What then, assuming that this view of the matter is correct, becomes of the form lately known as *trichas*, the Maryland Yellow-throat?

Wilson used the Brissonian name *marylandica* as a pure synonym of *trichas*, with which *personatus* of Swainson is also synonymous. Fortunately, therefore, unless someone desires the questionable distinction of standing as sponsor for the form lately known as *trichas*, we shall not have to consider its claims to nomenclatural standing but may apply Swainson's name *brachidactyla* to all the Yellow-throats north of the range of *trichas* (= *ignota* Chapm.). Thus we shall have in eastern North America:

Geothlypis trichas trichas (Linn.).

SOUTHERN YELLOW-THROAT.

Turdus trichas Linnæus, Syst. Nat., Ed. 12, I, 1766, 293. (Type locality, Carolina.)

Range.—Florida, westward through the Gulf Coast region to Texas; north through the Atlantic Coast region to Virginia (Dismal Swamp); winters from South Carolina southward and also in Cuba (*cf.* Ridgway).

Geothlypis trichas brachidactyla (Swains.).

NORTHERN YELLOW-THROAT.

Trichas brachidactylus Swainson, Anim. in Menag., 1838, 295. (Type locality, "northern provinces of the United States".)

Range.—North America from the "more western portion of the Great Plains" (Ridgw.) eastward, north to Manitoba and southern Labrador, south to the Austroriparian region; winters from the Gulf States southward to the Bahamas, Greater Antilles, Mexico, and Central America.

ORIGIN OF THE FORMS.

An interesting fact developed by Mr. Palmer (*l. c.*) in his discussion of the relationships of these birds is that the central form of the Yellow-throat, to which he restricted the name *trichas*, averages smaller and paler than the form to the north and to the south of it. The extreme northern form of Yellow-throat, therefore, is, apparently, not connected with the southern Yellow-throat by,

so to speak, a graduated scale of regularly arising, cumulative differences, but at their points of contact they are more unlike than at their geographical extremes.

We consequently are led to consider the possibility of the Yellow-throats having acquired their present range through some such method of progress as the Grackles appear to have followed,¹ and an earlier stage of which the Loggerhead and Migrant Shrikes exhibit. An apparently not dissimilar case is afforded by the Parula Warblers, in which the New England form is the same as that found in the Mississippi Valley.

In other words, Yellow-throats may have advanced from Florida northward, and also from the Mississippi Valley eastward and northward; when, as has been said, the Northern Yellow-throat is not a direct geographical offshoot of the southern bird, although both doubtless had a common point of origin. Intergradation, therefore, is not necessarily climatic but follows actual contact occasioned by extension of range.

NOTES ON THE EARLY LIFE OF LOON CHICKS.

BY C. WILLIAM BEEBE.

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Plate II.

ON AUGUST 4, 1906, two eggs were taken from the nest of a Loon, *Gavia imber* (Gunn.), on a lake of the Muskoka District, Ontario. The eggs were cold, and from observation it was judged that the parents had deserted them some 48 hours previously. Packed in a suit-case, the eggs were brought to New York City and on the evening of August 6, one young loon hatched. The following day this chick was brought to the New York Zoölogical Park, together with the second egg, which was chipped.

¹ Cf. Chapman, Bull. Am. Mus. Nat. Hist., IV, 1892, pp. 1-20.